

13 7. (New) The method of claim 2, wherein the base material comprises MgO in the amount of 0.03 to 3.3 wt% and the balance being Ag.

8. (New) The method of claim 2, wherein the base material comprises MgO in the amount of 0.01 to 1.7 wt%, NiO in the amount of 0.02 to 1.3 wt%, and the balance being Ag.--

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### REMARKS

Claims 1-3 are pending and Claims 1-3 have been rejected. Claims 1 and 2 have been amended in this Amendment and new Claims 4-8 have been added.

Applicants thank the Examiner for the courtesy shown to its representative during the telephonic interview of August 6, 2002. It is submitted that the following is an accurate representation of the discussions conducted during that interview.

Claims 1 and 2 have been rejected under 35 U.S.C. 112, second paragraph, as indefinite for their use of the term "-like." Both claims have been amended to remove this term from the claim language. Therefore, it is requested that the rejection be withdrawn.

Claim 1 has been provisionally rejected under the judicially created doctrine of obviousness-type double patenting in light of Claim 1 of copending U.S. Application No. 09/787,440. It is hereby stated that Applicants formally abandon copending U.S. Application No. 09/787,440. In light of the abandonment of the copending application, it is submitted that the rejection is no longer proper and it is requested that the rejection be withdrawn.

Claim 1 was rejected under 35 U.S.C. 103(a) as obvious in light of the Shibata reference. Further to the discussions conducted on August 6, 2002, attached to this

Amendment is a Declaration in which it is shown that the presently claimed range results in unexpected benefits not disclosed in the Shibata reference. In particular, it is observed that the alloy of the Shibata reference is insufficient to produce the claimed invention. As seen in paragraph 7, an alloy as presently claimed was formed into an ingot and subjected to elongation in order to form a pipe. Additionally, the same process was undertaken with an alloy disclosed in the Shibata patent. As seen in paragraph 9 and Photo 2, however, the Shibata alloy cracked during the elongation of the ingot into a pipe. Thus, it is submitted that the Shibata alloy does not possess the same properties as the presently claimed alloy and it is requested, as per the discussions of August 6, 2002, that the obviousness rejection be withdrawn and that Claim 1 be allowed.

Claims 2 and 3 were also rejected as obvious under 35 U.S.C. 103. As discussed in the telephonic interview of August 6, 2002, it is submitted that the contents of the attached Declaration are sufficient to overcome the obviousness rejection of Claim 3. It is, therefore, requested that this rejection be withdrawn.

Regarding the rejection of Claim 2, it is noted that the Examiner has maintained his position that the combination of the Tsuji and Sistare patents are sufficient to render Claim 2 unpatentable. The Examiner has taken the position that the cadmium oxide disclosed in the Sistare patent is the "functional equivalent" of the oxides recited in pending Claim 2. The Examiner has cited the teachings of the abstract of Sistare as support for his position. It is submitted, however, that the Sistare abstract merely states that different oxides can be mixed together, not that cadmium oxide is an equivalent of,

for example, magnesium oxide. Therefore, it is submitted that the rejection is improper for this reason

Additionally, it is submitted that cadmium oxide is not an equivalent of either magnesium oxide or nickel oxide. It is noted that the subject matter of the Sistare patent is drawn to a method of manufacturing an electric contact material, in particular, a make-and-break circuit. In a contact material, cadmium oxide plays an important role in improving resistance to “welding.” During contact (in which electricity is applied), the materials involved can become melted together and the materials may even become interlocked with each other. The phenomenon is known as “welding”. However, it is submitted that it is well known that cadmium oxide is effective in preventing welding from occurring.

Additionally, it is well known that the oxides recited in Claim 2 do not improve resistance to welding. The oxides of Claim 2 are added in order to ensure the strength of the final alloy, not to imbue the final composition with a resistance to welding. Therefore, it is submitted that the claimed composition and the composition disclosed in the Sistare patent are different compositions, and exhibit different properties. It is submitted that one of ordinary skill in the art would not have been motivated by the teachings of the Sistare reference to replace an additive that is used to imbue a resistance to welding with a different additive to improve the strength of an alloy. As this motivation is lacking and because the Tsuji reference does not remedy the deficiencies of the Sistare reference, it is requested that the rejection be withdrawn for these reasons.

As for the Tsuji reference, it is submitted that the Tsuji reference does not teach that the nickel in the alloy is oxidized, unlike the presently claimed alloy. It is submitted

that the Tsuji reference teaches a silver-based alloy in which only lithium oxide and aluminum oxide have been dispersed. Therefore, unlike the present invention, nickel is present in the Tsuji alloy as merely an additional element. While Tsuji does disclose the manufacture of an alloy through an internal oxidation method, it is submitted that the only ingredient oxidized through the internal oxidation process is lithium. Therefore, because nickel is not oxidized in the Tsuji alloy, it is submitted that the Tsuji reference is insufficient to render the present invention obvious.

In light of these facts, it is submitted that the rejection of Claim 2 in light of the Tsuji and Sistare references is improper as cadmium oxide possesses different properties than that of the claimed calcium oxide and magnesium oxide, and because nickel is not oxidized in the Tsuji alloy. Thus, the references fail to teach all of the claimed aspects of Claim 2. Therefore, it is requested that the rejection be withdrawn.

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No. 01-2300, referring to client-matter number 108384-00016.

Respectfully submitted,



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Attachments:        Marked Up Copy of the Claims  
                         Declaration

### **MARKED UP COPY OF THE CLAIMS**

1. (Amended) [An auxiliary material] A [for use with a superconductive] composite material, wherein said composite material comprises an [which is a pipe-like or a tape-like] Ag alloy [auxiliary] material in a pipe or tape form and a superconductive material [for use in a process of treating a superconductive material], wherein said Ag alloy material at least partially encloses the superconductive material, and

wherein said Ag alloy material comprises Ag [is used] as a base material[, and MgO [alone or MgO and NiO formed by internal oxidation are], wherein the MgO is dispersed in the Ag base material and formed through the process of internal oxidation, wherein said MgO is 0.03 to 3.3 wt% the [and a] balance [is] being Ag[, alternatively, MgO is 0.01 to 1.7 wt%, NiO is 0.02 to 1.3 wt% and a balance is Ag].

2. (Amended) A method of manufacturing an auxiliary material for use with a superconductive material, said method comprising the steps of:

after a base material consisting of either an Ag-Mg composition or an Ag-Mg-Ni composition has been dissolved and cast, rolling or subjecting the base material to a pipe drawing treatment;

[while being formed into a predetermined thickness and a predetermined length,] subjecting the base material to an internal oxidation which is carried out at the temperature of 650 to 850°C and continued for 20 to 80 hours in an oxygen atmosphere have a pressure of 3 to 10 atm; and

[further] thereafter subjecting the base material to a further rolling treatment or a further pipe drawing treatment, thereby producing a [tape-like] material [or pipe-like

material] in a pipe or tape form having a predetermined thickness and a predetermined length.